

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An implantable spinal connector for mating a spinal fixation element to a spinal anchoring device, comprising:

a clamp member having top and bottom portions with a recess formed there between, the top and bottom portions including first and second ends, the second ends being ~~that are~~ connected to one another ~~at a terminal end thereof~~ such that the top and bottom portions are movable between an open position in which the top and bottom portions are spaced a distance apart from one another, and a closed position in which the clamp member is adapted to engage a spinal fixation element disposed within the recess ~~there between~~, the top and bottom portions including ~~superior inferior~~ and ~~inferior superior~~ surfaces, respectively, that extend from the recess to the first end and that taper away from one another toward the ~~terminal~~ first end along an entire length thereof, and the clamp member further including a bore extending through the top and bottom portions for receiving a locking mechanism for locking the top and bottom portions in the closed position, the bore in at least one of the top and bottom portions being internally threaded for mating with corresponding threads formed on at least a portion of the locking mechanism.

2-3. (Cancelled).

4. (Currently Amended) The implantable spinal connector of claim 21, wherein the recess is formed in at least one of ~~an~~ the inferior surface of the top portion and a the superior surface of the bottom portion.

5. (Original) The implantable spinal connector of claim 4, wherein the recess is formed in each of the inferior surface of the top portion and the superior surface of the bottom portion of the clamp member.

6. (Previously Presented) The implantable spinal connector of claim 5, wherein the recess has a concave shape such that the recess defines a substantially cylindrical recess when the clamp member is in the closed position.

7. (Withdrawn -- Currently Amended) The implantable spinal connector of claim 1, wherein

the top and bottom portions are hingedly coupled to one another at the ~~terminal~~ second end thereof.

8. (Withdrawn -- Currently Amended) The implantable spinal connector of claim 1, further comprising a pivot pin extending through the ~~terminal~~ second end of each of the top and bottom portions for hingedly mating the top and bottom portions to one another.

9. (Withdrawn -- Currently Amended) The implantable spinal connector of claim 8, wherein the pivot pin extends through a bore formed through and extending along a ~~terminal~~ second end of each of the top and bottom portions of the clamp member.

10. (Withdrawn -- Currently Amended) The implantable spinal connector of claim 9, ~~further comprising a recess formed between the top and bottom portions for receiving a spinal fixation element, wherein~~ the recess extends ~~ing~~ in a direction substantially parallel to a direction of the bore formed through and extending along a ~~terminal~~ the second end of each of the top and bottom portions of the clamp member.

11. (Original) The implantable spinal connector of claim 1, wherein the top and bottom portions are biased to a closed position such that a force greater than the biasing force must be applied to move the top and bottom portions to the open position.

12. (Original) The implantable spinal connector of claim 1, wherein the top and bottom portions are biased to an open position such that a force greater than the biasing force must be applied to move the top and bottom portions to the closed position.

13. (Original) The implantable spinal connector of claim 1, further comprising a locking mechanism disposable through the bore and effective to lock the top and bottom portions in the closed position to retain a spinal fixation element there between.

14. (Original) The implantable spinal connector of claim 13, wherein the locking mechanism comprises a fastening element having a head and a shaft, and wherein one of the bore formed in the top portion and the bore formed in the bottom portion of the clamp member is adapted to freely rotatably receive the threaded shaft of the fastening element, and the other one of the bore formed in

the top portion and the bore formed in the bottom portion is internally threaded to mate to threads formed on at least a portion of the shaft of the fastening element.

15. (Previously Presented) The implantable spinal connector of claim 14, wherein the fastening element includes a flange formed there around and adapted to at least temporarily mate the fastening element to a spinal anchoring device.

16. (Original) The implantable spinal connector of claim 14, wherein the bore in the top portion of the clamp member is internally threaded for mating with corresponding threads formed on at least a portion of the shaft.

17. (Original) The implantable spinal connector of claim 16, wherein the threads in the bore in the top portion of the clamp member and the threads formed on at least a portion of the shaft are left-handed threads.

18. (Original) The implantable spinal connector of claim 16, wherein the fastening element includes a mating element formed on a distal-most end thereof for mating with a driver tool.

19. (Original) The implantable spinal connector of claim 18, wherein the mating element comprises a socket.

20. (Withdrawn) The implantable spinal connector of claim 1, wherein the bottom portion of the clamp member is formed integrally with a spinal fixation plate.

21. (Withdrawn) The implantable spinal connector of claim 1, further comprising a recess formed in a superior surface of the top portion of the clamp member for seating a head of a fastening element.

22. (Original) The implantable spinal connector of claim 1, wherein the clamp member is formed from a material that allows the clamp member to deform around a spinal fixation element disposed between the top and bottom portions when the clamp member is locked in the closed position.

23. (Currently Amended) An implantable spinal connector for mating a spinal fixation element to a spinal anchoring device, comprising:

a clamp member having top and bottom portions ~~that are~~ with first and second terminal ends, the top and bottom portions being connected to one another at a the second terminal end thereof such that the top and bottom portions are movable between an open position and a closed position;

a recess formed between an inferior ~~superior~~ surface of the top portion of the clamp member and ~~an inferior~~ a superior surface of the bottom portion of the clamp member, the recess being adapted to seat a spinal fixation element therein, the inferior surface of the top portion and the superior surface of the bottom portion tapering away from one another toward the first terminal end along an entire length thereof between the recess and the first terminal end; and

axially aligned, concentric bores extending through the top and bottom portions at a location spaced apart from the recess, the bores being configured to receive a locking mechanism for locking the top and bottom portions in the closed position; ~~and~~

~~a substantially planar inferior surface extending along the bottom portion of the clamp member and configured to engage a spinal fixation plate, and a superior surface extending along the top portion of the clamp member, the superior and inferior surfaces tapering away from one another toward the terminal end.~~

24. (Original) The implantable spinal connector of claim 23, wherein at least one of the concentric bores includes threads formed therein.

25. (Original) The implantable spinal connector of claim 24, wherein the threads are left-handed threads.

26-65. (Cancelled).